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ABSTRACT

This study sought information from two cohorts of student teachers regarding their concerns in the teaching practicum component of their course and strategies they used to cope with these concerns. Students completed the Perceptions of Teaching questionnaire, and supervising teachers rated them in seven teaching areas. Data were analyzed in various ways to (1) test the psychometric properties of the survey instrument; (2) identify aspects of the practicum that concerned students most and least; (3) examine differences between students' experiences of stress in relation to age, gender, and degree status (graduate or undergraduate); (4) define strategies that students reported help them cope with practicum stresses; and (5) investigate the relationship between stress and teaching performance. Examination of data across time yielded a consistent finding of significant reduction in stress from the first to the second practicum. The composition of this change produced a constant pattern of greater concern for students in the area of preparation and less concern related to school evaluation. The critical importance of the student/supervising teacher relationship for student success in the practicum emerged both from the students' reports that seeking support from the teacher was their principal coping strategy, and from the strong link found between stress in the relationship and teachers' poorer rating of the students' performance. (Contains 15 references.) (Author/SM)

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Under Stress: The Concerns and Coping Strategies of Teacher Education Students

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Under Stress: The Concerns and Coping Strategies of Teacher Education Students

Summary

The topic of student teacher stress in the practicum has generated interest across teacher education programs. In this study information was sought from two cohorts of students regarding their concerns in the teaching practicum component of their course and the strategies they used to cope with these concerns. Data were analyzed in various ways to: (1) test the psychometric properties of the survey instrument; (2) identify the aspects of the practicum that concern students most and least; (3) examine differences between students' experiences of stress in relation to gender, age, and degree status (graduate or undergraduate); (4) define strategies that students report help them cope with practicum stresses; and, (5) investigate the relationship between stress and teaching performance. Examination of data across time yielded a consistent finding of significant reduction in stress from the first to the second practicum. The composition of this change also produced a constant pattern of greater concern for students in the area of Preparation and less concern related to School Evaluation. The critical importance of the student /supervising teacher relationship for student success in the practicum emerged both from the students' reports that seeking support from the teacher was their principal coping strategy, and from the strong link found between stress in the relationship and teachers' poorer rating of the students' performance. Issues related to the findings are addressed in the discussion.

Introduction

Stress experienced by students in their practicum has been reported in enough studies to indicate that it is not an isolated phenomenon. In order to maximize the benefits of the teaching practicum for student teachers and for teacher educators, research is needed to address the concerns of students related to their teaching practice experiences. In this study stress (as conceptualized by Cox, 1978) was understood to involve the students' perceptions of demands on them (expressed concerns) associated with the teaching practicum, and their resources for coping (reported strategies).

Students' Concerns

MacDonald (1993), along with other researchers into student teacher stress (Campbell-Evans & Maloney, 1995; Capel, 1997; D'Rozario & Wong, 1996; Elkerton, 1984; Morton, Vesco, Williams, & Awender, 1997), confirmed that while students regard the teaching practicum as a valuable, if not the most valued, part of their teacher education program, they also consider it to be the most stressful. MacDonald's research identified that sources of stress were mainly generated by inconsistencies in the way students were evaluated by teachers, varying expectations of student performance and conformity between teachers, and marked variations in the quality of feedback given to students by their supervising teachers. Gender emerged as an issue in research conducted by D'Rozario and Wong (1996) with student teachers in Singapore, and by Morton et al. (1997). It was reported in both studies that females generally find the practicum experience more stressful than males. At a more general level, Bowers, Eichner, and Sacks (1982) suggested that not enough attention has been paid to the psychological 'readiness' of student teachers in teacher preparation programs. Programs have concentrated more on methodology and less on preparing students to cope with the inevitable anxieties and stresses associated with students' roles, relationships, and responsibilities of teaching.

The significance of identifying sources of student teacher stress lies in the evidence that stress affects teacher behaviour and this in turn reduces classroom effectiveness, particularly in relation to effects of reduced pupil achievement and increased levels of pupil anxiety. Elkerton (1984) exhorted teacher educators to identify stresses associated with the practicum and to assist students to effectively manage these stresses. Morton et al. (1997) pointed to the need to change

the nature of the role of teacher and university supervisors from a more directive to a more collaborative one in order to reduce student stress related to evaluation and assessment.

It might be reasonable to expect that one effect of successful practicum experience would be the reduction of stress in later practicums. However, the longitudinal research that has been conducted provides conflicting findings. Morton et al. (1997) found that both instructional preparation and teaching experience can reduce students' anxieties over time. Similarly, students in Sumison and Thomas' (1995) study reported considerably less stress in their second practicum, attributing this in part to their participation in a stress management program and in part to the knowledge and experience gained in the first practicum. Contrary to this, Silvernail and Costello (1983; in Morton et al., 1997) found no differences in degree of anxiety reduction or in the nature of the teaching concerns of one group of students after their 15-week placement and compared this with the reductions for another group of students who had undertaken a year-long internship. Capel (1997) found no significant reduction in stress for students between two practicums, while Elkerton (1984) reported a mixed finding of decreased stress related to preparation along with increased stress concerning pupil-teacher relationships. The mixed pattern of results suggests that there is a need for longitudinal examination of the nature of student teacher stress and of the components of the practicum experience that are associated with such stress.

In the current literature there is little informed discussion of the effects of stress on measures of performance. Writers in the field acknowledge that stress is to some extent a normal, even inevitable part of the process of developing from an inexperienced to a competent, confident beginning teacher. What is not known is the extent to which stress affects students' teaching performance.

Students' Coping Strategies

Unlike the literature on student stress in which conclusions have been drawn directly from the student data, there is less research on how students cope with stress. Very little research in this area has been concerned to take the students' perspectives. Few studies have sought information directly from students on the strategies actually used to cope with the stresses they encountered during the practicum. So, one of the aims of this research was to gather information from students on how they cope with the stresses they face in the practicum.

MacDonald (1993) is one author who sought the students' perspective on ways they coped with practicum stresses. In that study students reported that they coped by using strategies that MacDonald categorized as: communication; conformity; showing initiative; goal-setting; and relaxation techniques. Other writers (Capel, 1997; Elkerton, 1984; Sumison & Thomas, 1995) have adopted a counselling perspective in their focus on developing student teachers' personal coping skills for the self-management of anxiety. Another area that has received considerable attention in the literature is the importance of developing students' interpersonal relationship skills. Again, the perspective has been generally a self-managing one (Elkerton, 1984; Morton et al., 1997).

Morton et al. (1997) also recognized that changes may be enacted at the institutional level as well. Institutional level strategies for reducing stress that have been suggested include: developing an evaluation model over which students have some control to reduce evaluation anxiety (Morton et al., 1997); training of supervising teachers to develop a collaborative supervisory style (McJunkin et al., 1998), and use of non-threatening supervisory and evaluation skills (Bowers et al., 1983).

The students in MacDonald's (1993) study acknowledged that there would always be external stresses and the key to coping was the ability to control the internal stresses. Interestingly, while these students recognized that they must learn to cope at a personal level, they also suggested strategies at the institutional level, such as use of non-graded rather than graded evaluations, lighter assignment loads, and use of longer practicum placements which would reduce concerns related to the teaching practice.

It is clear from these reports that students employ not only self-managing strategies but also specific task-handling strategies such as conformity and showing initiative, strategies that are clearly context (practicum) specific. The emphasis placed by students on the importance of these suggests that there is a need for managers of teacher education programs to initiate structural changes that go beyond the teaching of content and the hope that the 'wit and experience' (Biggs, 1990) of students will ameliorate their concerns.

The brief review of the literature to date has left several questions unanswered and these provided the impetus for the research reported in this paper: (1) How are Australian students' concerns about the practicum conceptualized? (2) What concerns teacher education students

most and least in their practicum? (3) What account must be taken of gender, age, or intake differences between students in preparing them for the practicum given the greater diversity of students now than in the past? (4) What strategies do students employ to help them cope with practicum stresses and which of these do they regard as most important? (5) What is the effect of stress on teacher performance?

Participants

Flinders University offers two undergraduate and three graduate-entry Bachelor of Education degrees. The Junior Primary/Primary (JP/P) and Upper Primary/Lower Secondary (UPLS) degrees admit both undergraduate and graduate-entry students. The professional development component of the teacher education program, which is concentrated into the final two years (four semesters) of the four-year undergraduate degree represents the full B.Ed program for graduate students who enter with a completed university degree.

The practicum requires full-time commitment of students in schools in the first practicum that extends over eight weeks (2 weeks in Semester One and 6 weeks in Semester Two in the same school), and a second practicum of 8 weeks in Semester Three.

Results of the Course Experience Questionnaire (CEQ), which is sent to all students who graduate from university in Australia indicate a generally high level of student satisfaction with the Flinders B.Ed degree. Further, employer ratings show that more than half the Flinders students who submit applications to the local State Education Department receive the highest possible employment rating.

Despite these positive evaluations of the degree, there remains an unacceptably high attrition rate of around 30 % from this program. In part, this attrition is a consequence of students re-assessing their choice of teaching as a career. A majority of these students (approximately 19%) withdrew from the B.Ed. degree shortly after the beginning of the academic year or withdrew later in the year but before the commencement of the first practicum. A small number of students were not permitted to undertake the practicum because they had not met the requirements, such as failing pre-requisites. A further group of withdrawals (approximately 2%) commenced their teacher placement but reported not coping. Less than 1 % of students were advised that they would not receive a satisfactory report and withdrew from the first practicum before it was complete. In addition to withdrawals from the first practicum a smaller percentage

(approximately 8%) withdrew before completing the second practicum. What is not clear from the data is the extent to which this attrition is associated with stress induced at the time of students' practicum placements. This study was designed to provide us with information about the level of such stress and the way that it was managed by students.

Findings of this project are based on data gathered from two groups of students who provided information about their concerns in each of their two teaching experience placements. Group 1 completed their first practicum in 1996 and their second practicum in 1997 while students in Group 2 completed the first practicum in 1997 and the second practicum in 1998. For both groups the majority of students (Group 1: 74 %) and (Group 2: 73 %) were female.

Students' school placements ranged across all levels of schooling from Junior Primary through Upper Secondary, and across the Government, Independent and Catholic school sectors with the majority of placements in Government schools. In total, survey responses for Practicum 1 were obtained from 309 students and for Practicum 2 from 298 students. Undergraduate and Graduate Entry students were reasonably evenly represented in the responses (at 54 % and 46 % respectively).

Instruments

The Perceptions of Teaching Questionnaire

The Perceptions of Teaching questionnaire comprised three sections. The first section consisted of the Survey of Practicum Stresses (SPS; D'Rozario & Wong, 1996). D'Rozario and Wong developed the SPS to examine areas of stress experienced by first year teacher education students in Singapore. The questionnaire consists of 29 items representing experiences related to the practicum that students may find stressful (see Table 1). Students' responses indicate how often the experience may have stressed them on a 4-point Likert scale, where 1 = *Never stressed me*, 2 = *Stressed me some of the time*, 3 = *Stressed me most of the time*, and 4 = *Stressed me all the time*.

In the second section space was provided for students to answer the question "What coping strategies did you use to cope with any stress that you may have encountered during the practicum?" From analysis of Group 1's responses, nine broad strategy categories emerged (See Table 3). These were listed in the third section of the survey for Group 2 students who were asked, in addition to identifying their own coping strategies as Group 1 had done, to rank the 5

strategies that were the most important for them. Responses from the same students were obtained for both practicums.

Teachers' Assessments

In addition to the information that students provided, teachers who supervised Group 2 students in the second practicum were asked to rate their student teacher on a 5-point scale (1 = *Not yet satisfactory*, to 5 = *Outstanding*) on each of 7 teaching areas as well as an overall assessment. The seven teaching areas were: Professional Qualities; Curriculum Knowledge; Planning for Learning; Teaching Strategies; Assessment of Student Learning; Management of the Learning Environment; and Self-Evaluation of Teaching Performance. These seven dimensions were the areas on which teachers had provided detailed comment in the student's Final Practicum Report.

Results

How Are Australian Students' Concerns Conceptualized?

With data from 397 Singapore student teachers, D'Rozario and Wong developed a 7-factor model which then served as a basis for the 7 scales of the SPS: Overall Performance, Workload, New Colleagues, Co-operating Teacher, Supervisor, Teaching and Managing, and Helping.

In order to further examine the structural features of the SPS, data were gathered from approximately 300 Australian teacher education students. The confirmatory factor analysis of the Australian data failed to reproduce D'Rozario and Wong's (1996) 7-factor structure of the SPS. Subsequent exploratory factor analysis suggested a 4-factor solution instead. The adequacy of this model was tested via LISREL 8.12a (Jöreskog & Sörbom, 1993). The Goodness of Fit indices used to evaluate the fit of the model were derived from LISREL; these are RMSEA (Root mean square error of approximation) = 0.051; GFI (Goodness of Fit) = 0.92 and CFI (Comparative Fit) = 0.95. The obtained goodness-of-fit indices all suggested a good fit for the model.

Table 1 provides the operational definition of the four factors and the measurement model used to analyse the responses in this study. The four factors, namely, Teaching, Preparation, School Evaluation, and University Evaluation, were then treated as subscales in subsequent analyses. The scales showed good reliabilities (Practicum 1 alphas: Teaching = .85; Preparation = .77; University evaluation = .85; School evaluation = .74.) The corresponding reliabilities for

Practicum 2 were alphas: Teaching = .86; Preparation = .74; University evaluation = .81; School evaluation = .73.

What Concerns Students Most and Least in the Practicum?

The available responses to the 29 items on the questionnaire ranged from a minimum score of 29, indicating that the student experienced no stress on any item (score = 1) to a maximum score of 116, indicating that the student was always stressed (score = 4) in relation to every item. Table 1 (Appendix 1) presents the percentage distribution of students' responses across two practicums (Practicum 1 and Practicum 2). In this Table where the events were described as 'stressful most of the time' or 'all of the time' (rated 3 or 4) they were considered together as generally stressful experiences.

The area of concern where at least one third of all students expressed that the event caused stress either most or all of the time was having high expectations of their teaching performance. Coping with the teaching load, managing the class and enforcing discipline, striking a balance between the practicum and personal commitments, and managing time also emerged as issues rated as frequently generating stress for most students. Least stress was reported for communicating and relating to the Principal/Vice Principal, and to teachers in the school, including the students' supervising teacher(s). The majority of students were not concerned about establishing rapport with pupils. Over 60 % of students reported that these events never stressed them. At least half the students experienced stress at least some of the time for 21 of the 29 practicum-related.

Pairwise comparisons between the four survey subscales were made for both practicums to ascertain which areas were of most and least concern to students. The analyses included a Bonferonni adjustment for multiple comparisons. For both practicums students were significantly more stressed by Preparation concerns than by Teaching, School or University Evaluation concerns (Practicum 1: $F(3, 229) = 93.97$, $p < .001$, $ES = .55$; Practicum 2: $F(3, 135) = 18.75$, $p < .001$, $ES = .29$). Students were least concerned about School Evaluation.

Concerns Related to Gender, Age, Degree Status Across Two Practicums.

A series of multivariate repeated measures analyses of the data (MANOVAs) were performed on each of the dependent measures, namely the four Survey subscales (Teaching, Preparation, University Evaluation, and School Evaluation) to examine differences between groups across

Practicum 1 and Practicum 2, with Practicum as the repeated measure. The corresponding means and standard deviations are presented in Table 2 (Appendix). Multivariate analysis of variance of the differences in reported stress for the two cohorts (Groups 1 and 2) revealed no differences in subscale scores and in subsequent analyses the data from the two groups were combined.

Gender and Age

A similar pattern of findings emerged for the analyses involving Gender and Age. Analyses of differences between male and female students and between younger and older students revealed no main effect for either gender or age. In both cases, reported stress was greater for Practicum 1 than for Practicum 2 (Wilks' $\lambda = .80$; $F(4, 75) = 4.81$, $p < .01$, $ES = .20$ in the Gender analysis, and Wilks' $\lambda = .78$; $F(4, 76) = 5.27$, $p < .001$, $ES = .22$ in the Age analysis). In addition there was an effect for Age (Wilks' $\lambda = .87$; $F(4, 76) = 2.82$, $p < .05$, $ES = .13$). The latter result appeared to arise from the fact that the older age group reported somewhat higher levels of stress than the younger age group on the Teaching and Preparation subscales whereas the reverse occurred for the University Evaluation subscale.

Degree Status

There was no effect on reported stress associated with differences in level of entry to the Education degree. In the analysis for degree status the only statistically significant multivariate effect was for practicum (Wilks' $\lambda = .77$; $F(4, 53) = 3.94$, $p < .01$, $ES = .23$), reflecting the lower levels of stress associated with Practicum 2. Univariate analyses indicated that this effect reflected the decrease in stress associated with the Preparation subscale: ($F(1, 56) = 10.28$, $p < .01$).

Student Teacher Practicum Coping Strategies

From students' written responses to the question, "What coping strategies did you use to cope with any stress that you may have encountered during the practicum?", coping strategies were classified to obtain a picture of the range of strategies that students employed to help them cope with practicum stresses. In addition, Group 2 students also ranked the 5 strategies (from a list of 9) that were the most important for them. From this data strategies were identified that students regarded as most and least important.

Coping strategies used by students

The NUD*IST program (QSR, 1994) was employed for qualitative analysis of students' written comments. Four main categories of coping strategies were identified: Personal, Professional, Social, and Institutional. A number of subcategories were associated with these main categories. Included in Figure 1 are descriptions of the main categories and subcategories, along with descriptions of the specific strategies that formed them.

Insert Figure 1 about here

Personal Coping Strategies

Five specific strategies were identified under the category of Personal coping strategies. Personal coping was represented in:

(1) Cognitive strategies such as positive thinking, setting realistic expectations, pragmatism, and blocking the negative, and included comments like: "I concentrated on the positive aspects more than the negative" and "Telling myself that I am not an experienced teacher and cannot expect to perform like one".

(2 Physical strategies, some of which were active (recreation, sport and general exercise) while others were passive (listening to music, watching TV, reading).

(3) Behavioral strategies. These included the reported practice of engaging in routines, like walking the dog, housework, that did not require thought. "I coped with stress by having a can of coke and a biscuit at recess times."

(4) Emotional strategies included use of self-deprecation, a capacity of students to laugh at themselves: "If you make a mistake, like writing a word incorrectly in front of the class, it shows you are human", and trying not to be hard on themselves "I just did the best that I could."

(5) Rational/Time Organization strategies were identified by students in the way they clearly defined their priorities for work and free time: "On weekends I spent some time not thinking about anything involved with teaching." Students commonly stressed the importance of making time for themselves during the teaching practicum. Finding the time to relax, either passively or in a physically active way, was a widely reported strategy.

Professional Coping Strategies

Being well prepared for lessons as well as for the general responsibilities associated with life as a school teacher were seen as important strategies in avoiding stress. Three specific Professional coping strategies were identified:

(1) Knowledge of the curriculum and what they were expected to teach and knowing the structure, organisation and culture of the school helped students feel comfortable in that environment.

(2) Use of self-management skills such as preparation, planning and organizational skills were reflected in comments like "I tried to be well organised to prevent a last minute panic. I used detailed lesson plans and programmed the day in detail. On the home front I also tried to be better organised." Some students used self-reflection "I'm here to learn to be better so I have to face all challenges" while others reported techniques for managing school related problems.

(3) Professional qualities were classified as strategies where they were clearly adaptive "At least one lesson a week I would plan something I enjoyed as much as the kids e.g. music and drama." Students generally did not emphasise the role that a sound grasp of the curriculum or an awareness of school organization and culture might have as coping strategies. However, it might be that these are assumed elements of 'being prepared'.

Social Coping Strategies

Turning to family and friends in times of crisis or simply for conversation and reflection was widely reported as a significant coping strategy. Involvement in social events such 'partying' and general socialising away from their practicum school were seen by the students as important. Thus, Social coping included

(1) Discussion with people who were identified as friends and family: "I never had any stress. I made sure of this by socialising with staff and other students at a cafe after school" and

(2) Involvement in social events: "After school socialising, general socialising and partying."

Institutional Coping Strategies

Within this category were human and system-related strategies involving both the School and the University. Considerable emphasis was given to the importance of talking to, and learning from,

supervising teachers. Having other student teachers in the school with whom to share experiences was also significant.

(1) At the school level, the support of the students' supervising teacher, other teachers and student teacher peers provided a human contact in times of stress. A system-related school strategy was exemplified by use of non-instructional time which provided 'breathing space' in a hectic week.

(2) At the University level, the University supervisor provided a human point of contact while contact with the University Teaching Experience Office was identified as a system-related coping strategy.

Coping strategy use

Table 3 presents percentage responses for 120 students indicating which strategies were the most important, that is, strategies that were ranked either 1 or 2. Also, for each category the 'not important' column indicates the percentage for this category that was not ranked as one of the five important strategies.

For both Practicum 1 and Practicum 2 the most important strategy (coping resource) was the students' supervising teacher. Student responses highlighted the supportive role of the teacher: In the main responses focussed on the opportunity to "debrief with the teacher" and "talk through problems", comments that reinforce the qualitative statements reported earlier. The greatest variation between the practicums was the increased importance in Practicum 2 of the support from the university supervisor. This change is likely to be a reflection of the much closer working relationship established between the university supervisor and students in the on-campus preparation for Practicum 2. Of note also is the reduced need for support in terms of Behaviour Management strategies in Practicum 2.

Overall, there is considerable continuity from one practicum to the next in relation to coping with support from the classroom teacher identified as the most significant source. Such a finding would highlight the importance of students establishing an effective working relationship with their teaching supervisor.

Stress and Teaching Performance

An important aspect of this research was to gain a better understanding of the impact on teaching performance of stresses experienced by students. A certain amount of stress may be considered a

normal part of the process of adapting to unfamiliar environments, of forming new relationships, and of coming to terms with a range of new and different expectations required of their role as a classroom teacher. Ultimately, the significance of students' stress needs to be seen in light of any debilitating effect this stress may have on teaching performance.

The students' final assessment is a written report by the supervising teacher(s) that includes comment across a range of teaching areas and an overall evaluation of the student's performance as either satisfactory or unsatisfactory. In order to obtain data that would permit analysis of teaching performance in relation to stress in this study, the practicum supervising teachers of Group 2 students were requested to provide a more detailed assessment of their student's teaching for Practicum 2. Fifty-nine teachers (32 %) returned usable assessments on seven dimensions of teaching performance and an overall rating for Practicum 2.

T-test analyses of teachers performance ratings across all areas revealed no significant difference between groups in terms of gender (males vs females) or degree status (graduate vs undergraduate). For Practicum 2 there were too few students 21 years or younger to permit testing for differences between the younger and older age groups. Differences between groups in terms of Year Level taught (Junior Primary, Primary, Secondary) were examined by one-way ANOVAs on each of the teaching areas.

Junior Primary student teachers received significantly lower ratings ($F(2, 36) = 3.42$, $p < .05$) for Personal/Professional Qualities, Planning, Assessment, and for Self-evaluation. Thus, the overall assessment indicated a small but significant lower rating by teachers for the Junior Primary students.

In terms of overall teaching performance approximately 12 % (8 students) were rated as definitely not (or close to not) satisfactory (rated 1 or 2 on the 5-point scale); 56 % (33 students) were rated at least satisfactory (rated 3 or 4); and 30 % (18 students) were rated as Outstanding (rated 5). The mean rating was 3.76 ($SD = 1.25$).

We predicted that teachers' lower ratings of student performance would be associated with higher levels of stress reported by students. The results of the correlational analysis are presented in Table 4 to show the strength of the association between each of the Survey subscales and each of the Performance categories on which teachers rated their students.

Lower teacher ratings of performance are consistently related to students' higher levels of concern related to School Evaluation. The School Evaluation subscale comprised items that tapped concerns about relationships with the supervising teacher, other teachers and the school principal, being observed and evaluated by the supervising teacher, and an overall fear of failing the practicum. It appears that students' concerns were well founded. On the School Evaluation subscale, for each area of teaching performance, significantly higher levels of student concern were associated with lower teacher ratings.

A closer examination of the Survey items identified that the interpersonal relationships that are established between students and their teachers (Item 9) emerged as a decisive factor in determining how teachers rated the competence of their student. Without exception, performance was rated as significantly less competent by teachers where students had indicated that the relationship with their supervising teacher was a source of stress ($r = -.39$, $p < .01$) and where their relationship with the university supervisor was a source of stress ($r = -.27$, $p < .05$). Along with stress in the relationship between student and teacher, students fear of failing the practicum was significantly related to teachers' assessment of their performance as poorer ($r = -.36$, $p < .01$).

Insert Table 4 About Here

However, these results do not necessarily mean that highly stressed students will receive poor teacher ratings. There were 57 students who had total stress scores greater than the mean score ($M = 49.25$, $SD = 9.41$) and teacher ratings were matched with the students' total stress score for this 'high stress' group to see if they were associated in any way. Matching occurred for 11 cases: Teachers had rated seven (high reported level of stress) students as Highly competent or Outstanding (score = 4 or 5); two students as Satisfactory (score = 3); and, two students as Not Yet Satisfactory (score = 1). For this very small sample, higher levels of concern did not have an adverse effect on teacher ratings.

An important constraint in analysis and interpretation of the results is that data were obtained only for students who completed the practicum. Performance ratings do not take into

account the students (approximately 8% for Practicum 2) who had withdrawn before the end of their teaching experience.

Discussion

As noted earlier, the topic of student teacher stress in the practicum has generated interest across teacher education programs. Researchers have sought to achieve a better understanding of the issue in a variety of ways. In this study information was sought from students about their concerns regarding the teaching practicum component of their course and the strategies they used to cope with these concerns. Seeking this feedback from students was based on the view that student feedback is a critical component of program evaluation and improvement (Vlahov, 1995). Examination of data across time for two student cohorts yielded a consistent, powerful finding of significant reduction in stress from the first to the second practicum. The composition of this change also produced a consistent pattern of greater concern for students in the area of Preparation and less concern related to School Evaluation. The critical importance of the student /supervising teacher relationship for student success in the practicum emerged both from the students' reports that seeking support from the teacher was their principal coping strategy, and from the strong link found between stress in the relationship and teachers' poorer rating of the students' teaching performance. Discussion pertinent to these findings and issues related to the specific research questions are addressed below.

How are Australian students' concerns about the practicum conceptualized? The Survey of Practicum Stresses SPS (D'Rozario & Wong, 1996) was used originally to examine areas of stress experienced by first-year Singapore teacher education students and was the instrument selected for this research. A preliminary investigation of the psychometric properties of D'Rozario & Wong's (1996) Survey of Practicum Stresses did not find support in the South Australian data for their 7-factor model. Further analysis was undertaken and a 4-factor model was supported. This model was employed in the analyses reported in this paper.

What concerns teacher education students most and least in their practicum? At least half the students experienced stress at least some of the time for 21 of the 29 Survey items. Concerns related to the Preparation subscale generated the highest level of stress. This was associated with concerns about balancing practicum and personal commitments, coping with the teaching workload, managing time, and concerns about others' expectations of their competence. The

students who now comprise the student population bring with them varied life experiences and a range of other competing interests, including work and family responsibilities that need to be balanced with achieving their goal of becoming teachers.

Students were least stressed by concerns related to the School Evaluation subscale. Most students expressed low levels of concern about failing the practicum, relations with the supervising teacher (including being observed and evaluated), relations with other teachers and the school Principal. The supervising teachers in our study appeared to be able to manage the dual roles of support and evaluation with little conflict. However, while students identified 'teacher support' as a prime strategy used to cope with practicum stress, with 'talking to teachers' as the most frequently cited strategy it was also the case that the teachers' less than satisfactory assessments of students were associated with the students' concern about the student-teacher relationship. It may be the case that either or both the student and the cooperating teacher were interpersonally not well-skilled. Further, it is not unreasonable to expect that some students are not suited to the role of teacher and that some teachers are ill-suited to the role of supervisor/mentor

What account must be taken of gender, age, or intake differences between students in preparing them for the practicum given the greater diversity of students now than in the past? In this study there were no significant differences in reported levels of stress between the two intakes of students, between males and females, younger and older student groups or between graduate-entry and undergraduate students. However, for all students, the first practicum was significantly more stressful than the second practicum. The finding of a considerable reduction in stress in the second practicum confirmed that the teaching experience itself may act as an effective strategy.

What strategies do students employ to help them cope with practicum stresses and which of these do they regard as most important? Students' reported coping strategies point to the importance of social support networks in developing and maintaining coping strategies while on teaching practicum. Such networks may be newly established (in the case of supervising teachers) or existing (such as family and friends). The quality of those strategies, measured against success in the practicum is not clear from the data. However, some issues emerging from the findings have implications for practicum placements. The first is the possibility of social isolation where a student might be the only one placed in a school. For example, in rural school placements where

there are no family or friends in the area, students could be denied opportunities to draw on effective coping strategies. Secondly, given the importance students placed on being able to talk with other student teachers during their practicum, this suggests that multiple placements in single school would be desirable. Finally, the quality of the supervising teacher emerged as a key component for success in the practicum. This finding is not surprising given that students move from the familiarity of the university setting into the new social and learning environment of the school, one in which they are novices and uninitiated. The supervising teacher is their major point of reference and advice in this new situation. For this reason alone, teachers need to be made aware of the high status granted to them by their students. Among Capel's (1997) suggestions for alleviating student concerns is a reminder that supervisors also need to take account of the impact of their presence on students. In our research, the reduced level of student concern about being observed and evaluated by the supervisor in the second practicum was most likely due to the opportunity provided for a closer relationship to be established between student, the supervisor, and the cooperating teacher.

What is the effect of stress on teacher performance? It was difficult to determine just how much stress is too much stress. On the one hand, the School Evaluation subscale showed, for each of the seven areas of teaching performance assessed, that higher levels of student concern were significantly associated with lower teacher ratings. In particular, poorer ratings were given by teachers to students whose relations with their teacher and fear of failing the practicum were perceived to be most stressful. On the other hand, amongst a small group of 11 students who had reported being highly stressed, seven received outstanding ratings from their teachers. In addition, the results on the relationship between stress and performance were confined to data from students who completed the practicum and did not include teachers' assessments of students who withdrew before the assessment period. Attrition is clearly a variable that must be taken into account in future research in this area. In the meantime it will be important also to observe whether the structural changes to the teacher education program will improve the retention rate of students.

Conclusion

While the increasingly diverse profile of students has brought with it greater richness and variety, this increased diversity also has brought with it increased complexity in delivery of the teacher

education program. The current challenge is to successfully meet the needs of students while at the same time maintaining the integrity of the program. Through understanding the practicum concerns and the coping strategies of their students, teacher educators will be better informed of ways in which to improve their teacher education programs.

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Table 1 *Percentage Distributions for the Individual Stress Items (by Practicum)*

Subscale Item (item number from D'Rozario & Wong)	Never Prac 1(Prac 2) %	Some of the Time Prac 1(Prac 2) %	Most/All the Time[a] Prac 1(Prac 2) %
Teaching Subscale			
Managing groupwork (22)	36.2(42.3)	52.1(52.6)	11.7(5.2)
Students with learning difficulties (25)	36.3(44.7)	53.0(47.8)	10.7(7.5)
Pupils' emotional/behav'l problems (26)	23.7(30.7)	58.0(60.3)	18.3(9.0)
Managing individual seatwork (23)	54.7(65.4)	41.3(33.6)	4.0(1.1)
Giving appropriate feedback to pupils(21)	47.9(54.8)	43.6(41.1)	8.5(4.1)
Classroom management (24)	14.9(25.7)	64.4(65.1)	20.7(9.2)
Communicating concepts to pupils (20)	28.0(41.2)	61.2(54.7)	10.7(4.1)
Teaching mixed ability classes (27)	41.5(41.5)	50.9(50.9)	7.6(7.6)
Marking pupils' written work (28)	60.6(61.1)	31.5(34.4)	7.9(4.5)
Delivering lessons (19)	20.2(35.3)	65.1(59.6)	14.7(5.1)
Establishing rapport with pupils (18)	65.1(69.7)	29.9(26.8)	4.9(3.5)
Having high expectations (3)	9.4(8.5)	50.8(46.1)	39.7(45.4)
Preparation Subscale			
Overall teaching workload (5)	12.1(18.6)	60.9(63.2)	27.0(18.2)
Selecting lesson content (16)	18.3(31.1)	63.1(58.7)	18.6(10.2)
Writing detailed lesson plans (15)	31.1(49.3)	54.1(43.4)	14.8(7.3)
Preparing resources for lessons (17)	33.7(40.8)	53.6(52.6)	12.7(6.6)
Managing time (29)	25.0(32.2)	52.3(55.8)	22.7(12.0)
Others expectations beyond me (4)	33.9(49.1)	55.3(41.8)	10.9(9.1)
Striking a balance (2)	26.6(29.4)	49.3(50.5)	24.0(20.1)
Practicum-related assignments (6)	26.8(37.0)	53.0(45.1)	20.2(17.9)
University Evaluation Subscale			
Evaluated by my supervisor (14)	30.7(47.2)	43.5(41.7)	25.8(11.0)
Observed by my supervisor (13)	24.4(44.5)	51.8(43.4)	23.8(12.1)
Relating to my supervisor (12)	60.9(66.3)	31.5(26.0)	7.6 (7.7)
School Evaluation Subscale			
Observed by Cooperating teacher(s) (10)	40.3(53.3)	52.8(40.8)	6.9 (5.9)
Evaluated by Cooperating teacher(s) (11)	36.2(40.7)	47.9(50.0)	15.9 (9.3)
Relating to Cooperating teacher(s) (9)	70.5(64.8)	26.5(28.9)	3.0 (6.3)
Relating to teachers in the school (8)	74.8(78.0)	21.6(19.5)	3.6 (2.4)
Fear of failing the practicum (1)	49.5(48.3)	43.6(42.7)	6.9 (9.0)
Relating to Principal/Deputy Principal (7)	76.4(75.3)	19.9(19.8)	3.7 (4.9)

Note. [a] The *Most/All the Time* category was created by combining the original categories *Most of Time* and *All the Time*.

Table 2a *Means and Standard Deviations for the Four Stress Survey Subscales (by Practicum and Gender)*

	Practicum 1				Practicum 2			
	Males[a]		Females[b]		Males[a]		Females[b]	
Subscale	*M*	(*SD*)	*M*	(*SD*)	*M*	(*SD*)	*M*	(*SD*)
Teaching	1.83	(.36)	1.82	(.39)	1.68	(.44)	1.69	(.37)
Preparation	1.97	(.36)	2.03	(.42)	1.81	(.48)	1.78	(.36)
University Evaluation	1.68	(.72)	1.87	(.69)	1.47	(.55)	1.67	(.67)
School Evaluation	1.40	(.36)	1.47	(.37)	1.40	(.46)	1.46	(.38)

Note. [a] n = 34-60. [b] n = 73-154.

Table 2b *Means and Standard Deviations for the Four Stress Survey Subscales (by Practicum and Age Group)*

	Practicum 1				Practicum 2			
	Younger[a]		Older[b]		Younger[a]		Older[b]	
Subscale	*M*	(*SD*)	*M*	(*SD*)	*M*	(*SD*)	*M*	(*SD*)
Teaching	1.82	(.35)	1.90	(.40)	1.59	(.35)	1.68	(.39)
Preparation	1.90	(.24)	2.18	(.46)	1.66	(.31)	1.79	(.48)
University Evaluation	2.09	(.70)	1.95	(.70)	1.79	(.66)	1.63	(.67)
School Evaluation	1.63	(.40)	1.55	(.41)	1.43	(.38)	1.51	(.37)

Note. [a] n = 18-38. [b] n = 19-39.

Table 2c *Means and Standard Deviations for the Four Stress Survey Subscales (by Practicum and Degree Status)*

	Practicum 1				Practicum 2			
	Graduate		Undergraduate		Graduate		Undergraduate	
Subscale	*M*	(*SD*)[a]	*M*	(*SD*)[b]	*M*	(*SD*)[a]	*M*	(*SD*)[b]
Teaching	1.89	(.32)	1.72	(.42)	1.81	(.36)	1.64	(.42)
Preparation	2.06	(.36)	1.92	(.39)	1.83	(.42)	1.81	(.39)
University Evaluation	1.83	(.71)	1.64	(.65)	1.55	(.53)	1.55	(.65)
School Evaluation	1.40	(.32)	1.38	(.34)	1.46	(.49)	1.43	(.36)

Note. [a] n = 35-61. [b] n = 33-72.

Table 3 *Importance of Student-Ranked Strategies for Coping with Practicum Stresses(Percentages).*

Strategy & Examples	**Practicum 1**		**Practicum 2**	
	Important %	Not Important %	Important %	Not Important %
Supervising Teacher (discuss problems, debrief)	70.0	8.3	64.2	4.2
Behavior Management (techniques, skills)	27.5	30.8	18.4	39.2
Curriculum Knowledge (subject content & methods)	26.7	23.3	21.6	38.3
Family (support, discuss problems)	20.9	46.7	25.8	42.5
Collegial/Peer (share problems, ideas)	15.8	49.2	19.9	47.5
Relaxation (massage, meditation)	13.3	37.5	15.8	42.5
University Supervisor (support, clarification)	11.6	55.8	21.7	50.0
Self-reflection (self-talk, rationalising)	9.2	67.5	8.4	54.2
Diversions (TV, routines, socialising)	1.6	87.5	1.7	85.8

Table 4 *Correlations Between Stress Survey Subscales and Teacher Ratings of Student Teaching Performance*

	Stress Survey Subscales			
Teaching Areas	**Teaching**	**Preparation**	**University Evaluation**	**School Evaluation**
Profess'al Qualities	–.06	–.21	–.13	–.36*
Curric. Knowledge	–.06	–.40*	–.30*	–.30*
Planning	–.01	–.30	–.32*	–.32*
Teaching Strategies	–.17	–.32	–.08	–.32*
Assessment	–.06	–.36*	–.24	–.31*
Management	–.14	–.12	–.15	–.39**
Self–Evaluation	.00	–.27	–.16	–.33*
Overall Performance	–.14	–.24	–.20	–.35*

* $p < .05$. ** $p < .01$.

Student Teacher Practicum Coping Strategies